

Sl. No.

**A10.3-R5 : INFORMATION SECURITY MANAGEMENT**

अवधि : 03 घंटे

DURATION : 03 Hours

अधिकतम अंक : 100

MAXIMUM MARKS : 100

ओएमआर शीट सं. :

OMR Sheet No. :

रोल नं. :

Roll No. :

उत्तर-पुस्तिका सं. :

Answer Sheet No. :

परीक्षार्थी का नाम :

Name of Candidate :

परीक्षार्थी के हस्ताक्षर :

Signature of Candidate :

**परीक्षार्थियों के लिए निर्देश :****Instructions for Candidate :**

कृपया प्रश्न-पुस्तिका, ओएमआर शीट एवं उत्तर-पुस्तिका में दिये गए निर्देशों को ध्यानपूर्वक पढ़ें।	Carefully read the instructions given on Question Paper, OMR Sheet and Answer Sheet.
प्रश्न-पुस्तिका की भाषा अंग्रेजी है। परीक्षार्थी केवल अंग्रेजी भाषा में ही उत्तर दे सकता है।	Question Paper is in English language. Candidate can answer in English language only.
इस मॉड्यूल/पेपर के दो भाग हैं। भाग एक में चार प्रश्न और भाग दो में पाँच प्रश्न हैं।	There are TWO PARTS in this Module/Paper. PART ONE contains FOUR questions and PART TWO contains FIVE questions.
भाग एक "वैकल्पिक" प्रकार का है जिसके कुल अंक 40 हैं तथा भाग दो "व्यक्तिपरक" प्रकार का है और इसके कुल अंक 60 हैं।	PART ONE is Objective type and carries 40 Marks. PART TWO is Subjective type and carries 60 Marks.
भाग एक के उत्तर, ओएमआर उत्तर-पुस्तिका पर ही दिये जाने हैं। भाग दो की उत्तर-पुस्तिका में भाग एक के उत्तर नहीं दिये जाने चाहिए।	PART ONE is to be answered in the OMR ANSWER SHEET only. PART ONE is NOT to be answered in the answer book for PART TWO.
भाग एक के लिए अधिकतम समय सीमा एक घण्टा निर्धारित की गई है। भाग दो की उत्तर-पुस्तिका, भाग एक की उत्तर-पुस्तिका जमा कराने के पश्चात् दी जाएगी। तथापि, निर्धारित एक घंटे से पहले भाग एक पूरा करने वाले परीक्षार्थी भाग एक की उत्तर-पुस्तिका निरीक्षक को सौंपने के तुरंत बाद, भाग दो की उत्तर-पुस्तिका ले सकते हैं।	Maximum time allotted for PART ONE is ONE HOUR. Answer book for PART TWO will be supplied at the table when the Answer Sheet for PART ONE is returned. However, Candidates who complete PART ONE earlier than one hour, can collect the answer book for PART TWO immediately after handing over the Answer Sheet for PART ONE to the Invigilator.
परीक्षार्थी, उपस्थिति-पत्रिका पर हस्ताक्षर किए बिना और अपनी उत्तर-पुस्तिका, निरीक्षक को सौंपे बिना, परीक्षा हॉल/कमरा नहीं छोड़ सकते हैं। ऐसा नहीं करने पर, परीक्षार्थी को इस मॉड्यूल/पेपर में अयोग्य घोषित कर दिया जाएगा।	Candidate cannot leave the examination hall/room without signing on the attendance sheet and handing over his/her Answer Sheet to the invigilator. Failing in doing so, will amount to disqualification of Candidate in this Module/Paper.
प्रश्न-पुस्तिका को खोलने के निर्देश मिलने के पश्चात् एवं उत्तर लिखना आरम्भ करने से पहले उम्मीदवार जाँच कर यह सुनिश्चित कर लें कि प्रश्न-पुस्तिका प्रत्येक दृष्टि से संपूर्ण है।	After receiving the instruction to open the booklet and before starting to answer the questions, the candidate should ensure that the Question Booklet is complete in all respect.

जब तक आपसे कहा न जाए, तब तक प्रश्न-पुस्तिका न खोलें।

DO NOT OPEN THE QUESTION BOOKLET UNTIL YOU ARE TOLD TO DO SO.

**PART ONE**

**(Answer all Questions.  
Each question carries ONE mark)**

- 1. Each question below gives a multiple choice of answers. Choose the most appropriate one and enter in the "OMR" answer sheet supplied with the question paper, following instructions therein.**

**(1x10)**

- 1.1** DDoS stands for \_\_\_\_\_.  
(A) Direct Distribution of Server  
(B) Distributed Denial of Service  
(C) Direct Distribution of Service  
(D) Distributed Denial of Server
- 1.2** Application layer DoS attack is also known as \_\_\_\_\_.  
(A) Layer4 DoS attack  
(B) Layer5 DoS attack  
(C) Layer6 DoS attack  
(D) Layer7 DoS attack
- 1.3** Which of them is not an objective of sniffing for hackers ?  
(A) Fetching passwords  
(B) Email texts  
(C) Types of files transferred  
(D) Geographic location of a user

- 1.4** What types of protocols are used in VPNs ?  
(A) Application level protocols  
(B) Tunnelling protocols  
(C) Network protocols  
(D) Mailing protocols
- 1.5** Which of the following is a disadvantage of Circuit-level gateway firewalls ?  
(A) They're expensive  
(B) They're complex in architecture  
(C) They do not filter individual packets  
(D) They're complex to setup
- 1.6** Which of the following port is not used by Trojans ?  
(A) UDP  
(B) TCP  
(C) SMTP  
(D) MP
- 1.7** Which of them is not an appropriate method of router security ?  
(A) Unused ports should be blocked  
(B) Unused interfaces and services should be disabled  
(C) Routing protocol needs to be programmed by security experts  
(D) Packet filtering needs to be enabled

<p><b>1.8</b> Which of the following is not the primary objective of cryptography ?</p> <p>(A) Confidentiality</p> <p>(B) Data Redundancy</p> <p>(C) Non-repudiation</p> <p>(D) Authentication</p>	<p><b>2.</b> Each statement below is either TRUE or FALSE. Choose the most appropriate one and enter your choice in the "OMR" answer sheet supplied with the question paper, following instructions therein. (1x10)</p> <p><b>2.1</b> Spyware is not a powerful &amp; one of the most widespread threats on the internet.</p> <p><b>2.2</b> Spiders are used which crawl webpages looking for email Ids and copies them to the database.</p> <p><b>2.3</b> DNS Hijacking can be attained by the use of malware or by changing the server's settings.</p> <p><b>2.4</b> Scanning phase in ethical hacking is known as the pre-attack phase.</p> <p><b>2.5</b> The TCP/IP model is 7-layer architecture where each layer is having some specific functionality to perform.</p> <p><b>2.6</b> The full form of OSI is OSI model is Open Systems Internet.</p> <p><b>2.7</b> The full form of EDR is Endpoint Detection and response.</p> <p><b>2.8</b> Cyber-laws are incorporated for punishing all criminals only.</p> <p><b>2.9</b> Information Technology Act-2000 is the full form of ITA-2000.</p> <p><b>2.10</b> Predict and analyze the tactics of competitors from data taken out from online data sources is a crime.</p>
<p><b>1.9</b> Logical ports are also known as _____.</p> <p>(A) numbered ports</p> <p>(B) virtual numbering</p> <p>(C) virtual ports</p> <p>(D) network protocol ports</p>	
<p><b>1.10</b> One advantage of Stateful Multilayer Inspection firewall is _____.</p> <p>(A) costlier but easy to understand</p> <p>(B) large to manage</p> <p>(C) complex internal architecture</p> <p>(D) large to manage but efficient</p>	

3. Match words and phrases in column X with the closest related meaning / word(s) / phrase(s) in column Y. Enter your selection in the “OMR” answer sheet supplied with the question paper, following instructions therein. (1x10)

Column X		Column Y	
3.1	VPN	A.	Block Cipher
3.2	Session Initiation Protocol is not used for	B.	Internet Protocol
3.3	Packet filtering firewalls work effectively in	C.	Virtual Private Network
3.4	DES	D.	Data gathering technique
3.5	IIS stands for	E.	Data Transfer
3.6	Web Server attack	F.	Internet information services
3.7	Network switch	G.	Smaller networks
3.8	Network Bridges	H.	Transport layer
3.9	OSI layer Four	I.	Data link Layer
3.10	IP	J.	Generic solutions to recurring problems
		K.	DoS attack
		L.	Ethernet bridge
		M.	Encryption

4. Each statement below has a blank space to fit one of the word(s) or phrase(s) in the list below. Choose the most appropriate option, enter your choice in the "OMR" answer sheet supplied with the question paper, following instructions therein. (1x10)

A.	access point	B.	debugging	C.	Encapsulating Secure Payload	D.	Systems analyst
E.	cipher system	F.	cryptanalysis	G.	Certificate authority	H.	key space
I.	phishing	J.	Caesar Cipher	K.	cyber attack	L.	Denial of service
M.	trojan						

- 4.1 \_\_\_\_\_ is the art & science of cracking the cipher-text without knowing the key.
- 4.2 A cryptosystem is also termed as \_\_\_\_\_.
- 4.3 DoS is abbreviated as \_\_\_\_\_.
- 4.4 \_\_\_\_\_ is the central node of 802.11 wireless operations.
- 4.5 ESP is abbreviated as \_\_\_\_\_.
- 4.6 \_\_\_\_\_ is an attempt to steal, spy, damage or destroy computer systems, networks or their associated information.
- 4.7 \_\_\_\_\_ is the entity for issuing digital certificates.
- 4.8 A set of all probable decryption keys are collectively termed as \_\_\_\_\_.
- 4.9 \_\_\_\_\_ is a mono-alphabetic encryption code wherein each & every letter of Plain- text is replaced by another letter in creating the cipher-text.
- 4.10 \_\_\_\_\_ is the technique used for tricking users to disclose their username and passwords through fake pages.

## PART TWO

(Answer any FOUR questions)

5. (a) What is audit planning ?  
(b) What is the purpose of audit ?  
(c) How many types of audits are there ? (5+5+5)
6. (a) Differentiate between switch and bridges ?  
(b) What is the difference between network layer and transport layer of OSI model ?  
(c) Write a short note on IT Act 2000. (4+5+6)
7. (a) What are the vulnerabilities of server applications ?  
(b) What is a Web server attack ? (7+8)
8. (a) Differentiate between symmetric and asymmetric cryptography.  
(b) Explain the process of DES and S-box utility. (7+8)

9. (a) What is sub netting ?  
(b) What are routers ? Why they are used ?  
(c) What is forensic analysis and what are the steps involved in such analysis ? (4+4+7)

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SPACE FOR ROUGH WORK

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